

January 14, 2021

Mr. Steve Anderson
Director of Facilities
Albert Lea Area Schools
211 Richway Drive
Albert Lea, MN 56007



**RE: Lead-in-Water First Draw – Follow-up Testings
IEA Project #201910427**

Dear Mr. Anderson:

At the request of Albert Lea Area Schools, IEA collected two (2) follow-up water samples for lead analyses in response to previously elevated sample results. This current sampling occurred on December 8, 2020, and January 5, 2021, one sample was collected on each date. The purpose of the sampling was to document lead content of water in the two (2) locations at Lakeview Elementary post-remediation and to compare the results to initial “first draw” sampling conducted on July 9, 2020 (see report dated July 28, 2020). This sampling was also conducted to document current lead content in these two (2) sampled locations with regard to the district designated action level of 20 ppb.

INTRODUCTION

Minnesota Statute 121A.335 requires public school buildings serving pre-kindergarten through grade 12 to test for lead in potable water fixtures every five years. The *3Ts for Reducing Lead in Drinking Water Toolkit (2018)* and the Lead Contamination Control Act (LCCA) of 1988 were created by the Environmental Protection Agency (EPA) to identify and reduce lead in drinking water. Lead is a metal that usually enters drinking water through the distribution system, including pipes, solders, faucets, and valves. Lead content in water may increase when the water is allowed to sit undisturbed in the system. Exposure to lead is a health concern.

The EPA recommends taking action when elevated lead levels are noted in water fixtures. The MDH and MDE recommend taking a fixture out of service if levels are 20 parts per billion (ppb) or higher. The MDH and MDE also recommend taking action according to their guidelines for fixtures with levels of 2 parts per billion (ppb) or higher.

First draw samples taken on July 9, 2020, showed that these two (2) sample locations had results with elevated lead content above the district designated action level of 20 ppb. The re-sampling was requested post-remediation of the piping being replaced to the South Wall Kitchen Sink and the replacement of the faucet fixture on the Nurse’s Office Sink.

METHODOLOGY

IEA collected two (2) first-draw (unless otherwise noted) samples of approximately 250 milliliters (ml) of water. “First draw” means the samples are collected before the fixture is used or flushed during the day. The first-draw sample results reflect a worst-case scenario, i.e., the highest lead level that would be consumed by building occupants. MDH recommends water stand in pipes for at least 8 hours, but not more than 18 hours prior to sampling identified fixtures.

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610 North Riverfront Drive
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210 Woodlake Drive SE
Rochester, MN 55904
507-281-6664 / FAX 507-281-6695
800-233-9513

BRAINERD
601 NW 5th Street, Ste. #4
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MARSHALL
1420 East College Drive
Marshall, MN 56258
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800-233-9513

VIRGINIA
5525 Emerald Avenue
Mountain Iron, MN 55768
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800-233-9513

Water samples were analyzed by Minnesota Valley Testing Laboratories (MVTl) in New Ulm, Minnesota, which uses EPA-approved analytical methods and quality control/assurance procedures. Samples were analyzed using the ICP/MS EPA Method 200.8.

RESULTS & DISCUSSION

The lead-in-water sampling results were: 9.92 ppb for the Nurse’s Office Sink sample, this is now below the district designated action level of 20 ppb; 21.8 ppb for the South Wall Kitchen Sink sample, this is still above the district designated action level of 20 ppb. These two (2) locations are displayed in *Table 1: Water Testing Results*. The laboratory reports are provided in Appendix A. Laboratory results are reported in micrograms per liter (µg/L) which is equivalent to ppb.

Table 1: Water Testing Results

Sample Number	Sampling Location	Fixture Type	Lead Results (ppb)		
			7-9-2020	Follow-up	
LAKE-120820-SL-01	Nurse’s Office Sink	Faucet	698.0	12-8-2020	9.92
010521-LAKE-01	South Wall Kitchen Sink	Sprayer	35.1	1-5-2021	21.80

ppb – parts per billion

RECOMMENDATIONS

IEA recommends implementing one of the following treatment options for the sprayer fixture for the South Wall Kitchen Sink with lead content exceeding the district designated action level of 20 ppb.

- Fixture could be removed from service by disconnecting it from the water supply and/or post signs that the water is not potable and notify staff accordingly.
- Bottled water could be provided to occupants which meets FDA and state standards. A written statement from the bottled water distributor guaranteeing the standard are met should be filed with the district.
- Lead pipes could be replaced on the property and district portion of the service line.
- The plumbing system could be reconfigured to redirect the water to bypass any known sources of lead contamination.
- Fixture could be replaced with a "lead-free" fixture certified to NSF/ANSI 372 or NSF/ANSI 61-G. The *Reduction of Lead in Drinking Water Act* redefines "lead-free" as "not more than a weighted average of 0.25% lead when used with respect to wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures." Effective January 4, 2014, drinking water system components sold or installed must adhere to this new requirement.
- A drinking water treatment unit certified to NSF/ANSI 53 or NSF/ANSI 42 for lead reduction could be installed.
- Flush testing could be conducted in accordance with MDH, MDE, and EPA guidelines to determine if flushing will reduce lead content. If results indicate that flushing will reduce lead to acceptable levels:
 - A flushing program should be implemented which includes documentation of daily flushing and periodic program review.
 - It should be noted that elevated levels can return quickly following flushing depending upon the age and condition of the plumbing. The plumbing components should be replaced to ensure any repair or replacement is done using only “lead-free” solder can address high lead levels.
 - Existing wires should be checked in the building that could be grounded to lead piping. The electrical current produced may accelerate the corrosion of the pipes, so consider checking the wires and finding an alternative grounding system.

It is recommended that a copy of this district's Lead-in-Drinking Water Testing Report be made available to staff and the public through the district's administrative offices. Per Minnesota Statutes, section 121A.335, a school district that has tested its buildings for the presence of lead shall make the results of the testing available to the public for review and must notify parents of the availability of the information.

GENERAL CONDITIONS

The analysis and opinions expressed in this report are based upon data obtained from the district at the indicated locations. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary and may not become evident without further assessment.

The report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental, health and safety practices. Other than as provided in the preceding sentence and in our Proposal #8034 dated April 1, 2019, regarding lead-in-water sampling at district locations including the General Conditions attached thereto, no warranties are extended or made.

Please contact IEA if you would like assistance with any of the above recommendations or have questions regarding this report.

Sincerely,

IEA, Inc.


Susan Liebl
EHS Account Manager

Reviewed by:


Karen Weiblen
EHS Consultant

KW/khb 01142021

Enc.

Appendix A

Laboratory Testing Reports



MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
 2616 E. Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
 1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

MEMBER
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Report Date: 16 Dec 2020

HEIDI SOLBERG
 IEA/BROOKLYN PARK
 9201 W BDWY STE #600
 BROOKLYN PARK MN 55445

Work Order #: 12-17606
 Account #: 002190
 Purchase Order #: 201910427

Date Received: 9 Dec 2020
 Date Sampled: 8 Dec 2020
 Time Sampled: 8:30
 Temperature at Receipt: 6.2C

PROJECT NAME: 201910427

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A59876	LAKE-120820-SL-01	9.92 ug/L	15.0	14 Dec 20	KAM

Approved by:

Dan O'Connell **David Smahel**
 Chemistry Laboratory Managers New Ulm, MN

Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards. The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix # = Due to concentration of other analytes
 ! = Due to sample quantity + = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

MVTl guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



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 1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

MEMBER
ACIL

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Report Date: 12 Jan 2021

SUE LIEBL
IEA
610 N. RIVERFRONT DRIVE
MANKATO MN 56001

Work Order #: 12-4117
Account #: 002190
Purchase Order #: 201910427

Date Received: 6 Jan 2021
Date Sampled: 5 Jan 2021
Time Sampled: 9:00
Temperature at Receipt: 18.9C

PROJECT NAME: ALBERT LEA
PROJECT NUMBER: 201910427

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A446	010521-LAKE-01	21.8 ug/L	15.0	11 Jan 21	KAM

Approved by:

Dan O'Connell **David Smahel**
Chemistry Laboratory Managers **New Ulm, MN**

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